

Remarks

The Office Action dated July 22, 2010, maintains the following rejections: claims 1, 11-12 and 17 stand rejected under 35 U.S.C. § 103(a) over Belschner (U.S. Patent No. 7,103,805) in view of Vail (U.S. Patent No. 6,918,068); claims 3-10, 13, 15-16 and 18-20 stand rejected under 35 U.S.C. § 103(a) over the '805 and '068 references and further in view of Riley (U.S. Patent No. 5,706,289); and claims 2 and 14 stand rejected under 35 U.S.C. § 103(a) over the '805 reference in view of Vail (U.S. Patent No. 5,528,168) and further in view of Baek (U.S. Patent No. 5,680,554). Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

As many of Applicant's traversals have either gone unaddressed or have been addressed only in part in the cursory Response to Arguments section of the instant Office Action, Applicant fully incorporates its traversals of record herein. Regarding Applicant's traversals that have gone unaddressed (contrary to the requirements of M.P.E.P. § 707.07(f)), Applicant understands that these traversals are now uncontested in the record as it stands (for Appeal).

Applicant maintains its traversals of all of the § 103(a) rejections because the primary '805 reference, either alone or in combination, lacks correspondence to the claimed invention. For example, none of the asserted references teaches the claimed invention "as a whole" (§ 103(a)) including aspects regarding, *e.g.*, the claimed bus monitor, bus driver and communication unit, as well as their interrelated functionality relative to the independent generation of release signals and related bus driver operation. More specifically, the Office Actions of record have repeatedly failed to provide correspondence to a bus driver circuit as claimed, which operates to block bus access according to two release signals that are generated separately at a bus monitor circuit and at a communication circuit, where the bus monitor and communication circuits "mutually independently implement an access time signal" to generate the release signals. Neither of the secondary '068 and '168 references disclose a bus driver that operates in response to two such (mutually, independently generated) release signals. Because none of the cited references teaches these aspects of the claimed invention, no reasonable interpretation of the asserted prior art, taken alone or in combination, establishes

correspondence under § 103(a). Accordingly, Applicant submits that the rejections of claims 1-20 are improper and requests that they be removed. The following addresses these and other matters in greater detail.

In attempting to assert correspondence to the claimed bus driver, the Office Actions of record have mistakenly referred to functionality of a cited “diagnostic unit” in the ‘805 reference. Specifically, the Office Action relies upon the “diagnostic unit” as corresponding to the claimed “communication unit,” which is separate from and provides an independent release signal to the claimed bus driver. In an effort to assist the Examiner (considering the Office Action’s indication that the “Examiner is unable to determine the instance where the diagnostic unit is asserted to be the bus driver”), Applicant refers to the previous rejections of record and to page 6 of the instant Office Action, which attribute functionality of the cited diagnostic unit (the alleged “communication unit”) to the claimed bus driver. The instant Office Action repeats the rejections of record in asserting that the cited “diagnostic unit” of the ‘805 reference is the “communication unit” of claim 1 (see page 6:7), then goes on to assert that this diagnostic unit functions in accordance with the claimed bus driver. For example, page 6:19-22 of the instant Office Action indicates that “the diagnostic unit ... evaluates these two release signals,” in attempting to assert correspondence to a bus driver that “evaluates these two release signals.” In this context, the Office Action has attempted to establish correspondence to the claimed communication unit by asserting that the cited “diagnostic unit” is the communication unit, but then attempts to assert correspondence to the claimed bus driver by again referring to the cited diagnostic unit.

Moreover, the Office Action has failed to establish correspondence to the mutually independent generation of release signals, or to the respective use of these signals as claimed. Specifically, the Office Action’s attempt to assert correspondence to a bus driver that “evaluates these two release signals” relies upon citation to discussion at column 3:13 of the ‘805 reference, which recites that “the diagnostic unit checks whether the bus monitor unit regularly retriggers in response to the time patterns by means of the trigger signals.” This discussion at column 3:13 does not refer to any comparison of release signals, much less to a bus driver’s comparison of release signals as mutually, independently generated by a bus monitor and communication unit as claimed.

Accordingly, the Office Actions of record have failed to establish correspondence to these aspects of claim 1 directed to a bus monitor and communication unit that separately generate release signals, and a bus driver that evaluates these (mutually, independently) generated signals. Moreover, as the Office Action's reference to a bus driver in the secondary '068 and '168 references at pages 3 and 4 fail to establish (or even assert) that these bus drivers would operate in accordance with the claimed invention, the addition of these references fails to overcome the above lack of correspondence. As the instant Office Action's response to Applicant's traversals regarding this matter is generally limited to the aforesaid statement regarding what the Examiner is "unable to determine" and does not address the bulk of Applicant's traversals, these traversals stand uncontested in the record (for Appeal). As all rejections rely upon this misinterpretation of the primary '805 reference, all of the rejections are improper and should be removed.

The § 103(a) rejections are also improper because the cited portions of the secondary Vail '068 reference fail to teach aspects of the claimed invention involving blocking access to a bus, as the cited portions are instead directed to selecting between busses (the Office Action's assertion of "functional equivalence" is contrary to M.P.E.P. § 2144.06). More specifically, the Office Action's assertion at page 7 that the "Examiner interprets the enablement of communications on the redundant communications bus as logically equivalent to inhibiting communication on the primary communication bus" fails to establish that the asserted "bus device 24" operates in accordance with the claimed bus driver, by evaluating mutually, independently generated release signals from a communication unit and bus monitor as claimed. In short, the secondary '068 reference's selection of a redundant bus is not based upon any evaluation of a release signal, and the Office Action has provided no explanation whatsoever as to this (missing) functionality. The previously-cited functionality of the cited "diagnostic unit" in the '805 reference, in which the diagnostic unit checks whether a bus monitor unit regularly retriggers, is not addressed in the context of the allegedly "functionally equivalent" operation of the "bus device 24'." Accordingly, the § 103(a) rejections of claims of 1, 3-13 and 15-20 have failed to establish correspondence via the combination of the '805 and '068 references, and should be removed.

The § 103(a) rejections of claims 2 and 14 over the '805 reference in view of the Vail '168 and '554 references are also improper because the body of the rejections refer to what appears to be assertions of teachings in the previously-cited Riley '289 reference, but the '289 reference is not relied upon in the rejection. Accordingly, the rejection is unclear and improper under § 103 and M.P.E.P. § 707.07(d).

The § 103(a) rejections of claims 2 and 14 over the '805 reference in view of the Vail '168 and '554 references are also improper because the Office Action fails to cite any portion of the '168 reference. Moreover, as the rejection is based upon an assertion that "Belschner ('805), modified by Riley teaches of a bus driver activating the transmission stage," and as nothing in the record explains any combination of the two references (alone), the rejection fails to establish correspondence. To the extent the rejection is referring to the previous § 103(a) rejection as applied to claims 3-10, 13, 15-16 and 18-20, Applicant submits that this rejection also relies upon the '168 reference, which is not cited in the rejection of claims 2 and 14. Moreover, as the proposed combination of the '805 and '168 references is improper in view of the above, the further addition of the '554 reference fails to overcome the above-established lack of correspondence.

In view of the above, Applicant believes that the rejections are improper and that further discussion of the improprieties of the rejections is unnecessary. However, the following addresses further improprieties in the rejections, as well as Applicant's traversals as presented in its previous responses of record, in greater detail.

With reference to claim limitations directed to a communication unit of a network node as in claim 1 and relevant to all claims, the Office Action has attempted to assert that the cited "diagnostic unit" is the same as the claimed "communication unit." However, nothing in either the Office Action or the cited references suggests that this alleged diagnostic unit implements "a communication protocol for communication with other network nodes via a communication medium" as commensurate with the claimed communication unit. The cited "diagnostic unit" does not appear to implement any communications protocol, much less doing so for communication with other network nodes. Instead, the "diagnostic unit" simply "monitors the regular retriggering of the bus monitor unit ... so that the bus monitor unit can be deactivated in the absence of

retriggering.” Moreover, the integration of this “diagnostic unit” into the central node is done specifically to avoid problems that occur when the diagnostic unit is separate from the central node (*see* column 3:25-37). This “diagnostic unit” thus has no bearing upon the implementation of a communication protocol as suggested in the Office Action, and fails to correspond as asserted.

Regarding limitations directed to a bus monitor unit and a communication unit (and as consistent with the above discussion), the cited portions of the ‘805 reference fail to disclose these limitations as part of a central node and that both “mutually independently implement an access time schedule contained in a configuration data record.” Specifically, the Office Action has asserted that the cited “diagnostic unit” and “bus monitor unit” at column two respectively correspond to the claimed “communication unit” and “bus monitor unit.” The Office Action then goes on to assert that the background discussion of “time-registering means” at column 2:13 corresponds to these limitations. However, this “time-registering means” at column 2 is used with “bus monitor units” that are in completely separate “distributor units” at different locations on a network, for transmission and assignment of a transmission slot to each user. This “time-registering means” is thus not used within a common node, by both a communication unit and bus monitor that mutually independently implement a time schedule in a configuration data record. Moreover, as the ‘805 reference discourages use of such an approach as described at column 2:13 as carrying “out only an impoverished level of diagnostics,” the reference teaches away from using the cited time-registering means for its later-discussed bus monitor and/or diagnostic unit (the impropriety of which is further discussed below).

Specifically regarding claim limitations directed to a bus driver that evaluates release signals as claimed, the Office Action’s citation to column 3:13 as corresponding to a “bus driver [that] evaluates these two release signals” does not cite to a bus driver at all, but instead refers to a diagnostic unit. The Office Action goes on to assert that a “second time pattern” is made available to the diagnostic unit, but this time pattern does not correspond to a release signal from a diagnostic unit and a bus monitor (which would further appear incongruous, as the cited diagnostic unit would not evaluate its own release signal). Accordingly, the Office Action has not established that any bus driver

evaluating a “second time pattern” corresponds to the claimed bus driver. In addition, the only discussion of a “bus driver” in the entire ‘805 reference is at cited column 5 at lines 47 and 52, which suggests that the bus driver operates to detect activity on an “external bus line” and “transmits this signal to the other users via the star point of the central node.” This discussion fails to disclose any bus driver that can or would be capable of evaluating release signals, within a network node as claimed. The Office Action has not established correspondence to the bus driver, configured and as part of a network node as claimed.

Applicant further asserts that the proposed addition of the secondary Vail ‘068 reference, which discloses selecting between two available busses, fails to overcome the above-discussed deficiencies in the ‘805 reference. The ‘068 reference also fails to provide correspondence to blocking access of a network node in the event that release signals do not coincide. As discussed above, the ‘805 reference does not compare release signals as claimed. The addition of the ‘068 reference, which chooses a bus based upon a truth table used for determining an error in a bus enable signal, also fails to disclose any comparison as the cited truth table is based upon enable signals from “a plurality of bus controllers 32, 33,” which do not correspond to the claimed invention (see column 3:25-28). The cited portion of the ‘068 reference at column 5:22 and Figure 7 fails to overcome this lack of correspondence, as the cited “bus device 24” as apparently asserted as the claimed “bus driver” (in addition to the cited “bus driver” in the ‘805 reference) describes a separate device, which is not asserted as internal to a network node as claimed, in combination with the ‘805 reference or otherwise. The Office Action is simply devoid of any explanation as to how this “bus device 24” now overcomes the lack of correspondence, would (or could) be integrated with the ‘805 reference, or any motivation for doing so.

Specifically regarding the rejections of claims 9, 13 and 18, the cited portions of the ‘068 reference, as combined with the ‘805 reference, fail to disclose communications with network nodes that consist of communications over a single communications link. The proposed combination of references, including the dual-link approach in the ‘068 reference, fails to disclose blocking access to a single communication link as claimed, as the secondary ‘068 reference requires that two links be present.

The Office Action's attempt to assert correspondence to bus driver limitations in discussing independent claim 11 also fails because the cited watchdog, which the Examiner asserts is functionally equivalent to the bus driver, fails to perform the functions of the bus driver as claimed. The '805 reference states the "watchdog 20, which checks whether the bus monitor unit 5, in particular its computing unit 18, is triggered by means of cyclically recurring trigger signals, is connected directly to the computing unit." (Col. 6:46-50). The watchdog does not receive two release signals; it receives one signal from the bus monitor. It is not connected to, and therefore cannot receive a signal from, a second source. Because it does not receive two signals there is no way the watchdog can compare two signals. Accordingly, nothing in the record supports the asserted correspondence to the claimed bus driver.

In view of the above, the Office Action has failed to establish correspondence to various limitations in each of the independent claims. Accordingly, all rejections are improper and Applicant requests that they be removed.

Applicant further traverses the § 103 rejection of all claims because the cited references teach away from the Office Action's proposed combination. Consistent with the recent Supreme Court decision, *M.P.E.P.* § 2143.01 explains the long-standing principle that a § 103 rejection cannot be maintained when the asserted modification undermines either the operation or the purpose of the main '805 reference - the rationale being that the prior art teaches away from such a modification. *See also KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) ("[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious."). In this instance, the proposed combination would render the '805 reference inoperable because it would result in blocking or allowing bus access based upon the cited truth table in the '068 reference, rather than using an internal diagnostic unit that also functions when "data communication outside the central node has partially collapsed" as discussed at column 2:31-32. Specifically, using the external monitoring/truth table of the '068 reference to detect bus enable signals from different units removes the internal diagnostics of the '805 reference, and renders it inoperable for its related purpose as discussed above, for alleviating the need for a separate communications network (column 2:66-67), and enjoying spatial proximity (column

3:26-29). Accordingly, modifying the '805 reference as asserted would render it inoperable for its various stated purposes related to internal monitoring at a central node using a diagnostic unit. Under M.P.E.P. § 2143.01, the rejections cannot be maintained.

Applicant further traverses the rejections of various dependent claims as relying upon the tertiary '289 and '554 references because the references fail to teach or suggest limitations as asserted in the instant Office Action, which has also failed to address Applicant's traversals regarding these references and the lack of disclosure, contrary to the requirements of M.P.E.P. § 707.07(f). The references cited in alleging correspondence to various limitations in the dependent claims remain the same. As this is now the third time the same rejections have been presented, without addressing Applicant's traversals, Applicant further maintains and fully incorporates its (uncontested) traversals of the §103 rejections of the dependent claims.

For example, the cited "element" (445 and 446 in the '289 reference) does not appear to show any inverse coding as in claim 3, as each "element" appears respectively to refer to a node at which an output 451 of a flip-flop 450 and a clock signal are provided (*see, e.g.,* Col. 22:3-45). Generally, the rejection is vague and unclear as to what is being asserted as teaching or suggesting inversely-coded signals and, specifically, inversely-coded trigger signals as modified by the '805 reference, and the instant Office Action has failed to further clarify (or even mention) these rejections. Regarding claims 4 and 5, the Office Action's citation to a low-pass filter for improving the fidelity of a protection time slot logic does not disclose limitations directed to an evaluation of release signals under the influence of a low-pass filter. Regarding claims 6 and 7, the Office Action's citation to an interface to a communications computer does not disclose claim limitations directed to error-state detection that is "resettable from the outside" (claim 6) or "signaled to the outside" (claim 7). These are examples of claims bearing limitations to which no correspondence has been provided on the record, and the rejections of other claims similarly fail. As such, the rejections of these claims cannot be maintained.

In view of the above and the traversals of record as incorporated herein (and unaddressed in the instant Office Action), Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Juergen Krause-Polstorff, of NXP Corporation at (408) 474-9062.

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131
CUSTOMER NO. 65913

By: 

Name: Robert J. Crawford
Reg. No.: 32,122
Eric J. Curtin
Reg. No. 47,511
(NXPS.518PA)